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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/089,871	06/04/98	BARENDSE	R 97253-A

HM12/0316
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EXAMINER	
TUNG, P	
ART UNIT	**PAPER NUMBER**
1652	9

DATE MAILED: 03/16/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/089,871	Applicant(s) Barendse et al.
	Examiner Peter Tung	Group Art Unit 1652

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *18-28 and 31-35* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *18-28 and 31-35* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of Group IV, claims 18-28 and 31-35 in Paper No. 8 is acknowledged.

2. Claims 18-28 and 31-35 are pending.

Specification

3. The use of the trademarks "S SEPHAROSE FAST FLOW" (page 17), "Q SEPHAROSE FAST FLOW" (page 17), "STIRRED CELL" (page 18) and "MARUMERISER" (page 18) has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

4. Claim 23 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the

claim(s) in independent form. Part (c) of the instant claim combines the elements of the Markush group of claim 22.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. The term "processing" in claim 8 is a relative term which renders the claim indefinite. The term "processing" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "processing" does not specifically define what action is performed on the solid carrier and the aqueous liquid phytase.

8. Claim 18 is unclear as to the concentration of the phytase solution. The concentration is provided in FTU/g. It is not clear if this is meant to refer to the specific activity of the phytase or to its liquid concentration. However, for liquid concentration, the units should be provided in units per liquid volume, e.g., units/ml.

9.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 18, 19, 21, 22, 25-28, 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamstra et al. in view of Nevalainen et al. (Ref. BJ, cited in IDS) and Jane et al. (U.S. Patent No. 5,397,834). Hamstra et al. teach (page 5, lines 25-34) a method of making feed pellets by adding phytase to said pellets. Hamstra et al. do not teach the composition of the pellets, other than that they are composed of an edible material (page 5, line 7). Nevalainen et al. teach (page 38, Table 1; page 3, lines 9-26) a highly active *A. niger* phytase and the use of

phytases in animal feed compositions. Nevalainen et al. do not teach feed pellets containing highly active *A. niger* phytase. Jane et al. teach (column 6, lines 17-39; column 5, lines 50-55) a composition comprising a starch aldehyde and less than 50% (w/w) of polyvinyl alcohol, where said composition may be pelleted for use as an animal feed. Jane et al. do not teach a phytase containing pellet. The phytase-containing granulate prepared by processing a solid carrier comprising at least 15% (w/w) of an edible carbohydrate polymer and an aqueous liquid comprising phytase of 14,000 FTU/g would have been obvious to one of ordinary skill in the art at the time the invention was made as one of ordinary skill in the art would have been motivated to combine the teachings of Hamstra et al. in view of Nevalainen et al. and Jane et al. to arrive at the phytase-containing granulate of the instant claims. One of ordinary skill is motivated to combine the teachings as Hamstra et al. teach making feed pellets by adding phytase to edible pellets, Nevalainen et al. teach using a highly active *A. niger* phytase in animal feed compositions and Jane et al. teach a composition which may be pelleted for use as an animal feed comprising a starch aldehyde and less than 50% (w/w) of polyvinyl alcohol. One of ordinary skill in the art would have recognized that the phytase added to the feed pellets, according to the teachings of Hamstra et al., could be the highly active *A. niger* phytase useful in animal feed compositions, according to the teachings of Nevalainen et al. and that the composition of the edible pellets may comprise a starch aldehyde and less than 50% (w/w) of polyvinyl alcohol, according to the teachings of Jane et al. One of ordinary skill in the art would have a reasonable expectation of success of making the phytase-containing pellets as it would be a reasonable expectation that *A.*

niger phytase according to the teachings of Nevalainen et al. can be added to feed pellets comprising a starch aldehyde and less than 50% (w/w) of polyvinyl alcohol, according to the teachings of Jane et al. Therefore the invention as a whole would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made.

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamstra et al. in view of Nevalainen et al. (Ref. BJ, cited in IDS) and Jane et al. (U.S. Patent No. 5,397,834) as applied to claims 18 and 19 above, and further in view of Overton. Claim 20 adds the further limitation of phytase-containing granules also comprising at least one divalent cation. The teachings of Hamstra et al. in view of Nevalainen et al. and Jane et al. have been discussed supra. Jane et al. further teach (column 6, lines 36 and 37) that a composition comprising a starch aldehyde and less than 50% (w/w) of polyvinyl alcohol may be nutritionally fortified by the inclusion of minerals. Jane et al. do not teach the addition of divalent cations to said composition. Overton teaches (column 2, lines 23-27) that calcium is traditionally used in animal feed. Overton does not teach a phytase-containing pellet also comprising calcium. The phytase-containing granulate comprising calcium, a divalent cation, would have been obvious to one of ordinary skill in the art at the time of the invention. One of ordinary skill in the art would have added calcium, a mineral traditionally used in animal feed, as taught by Overton, to a phytase-containing granulate for the benefit of nutritionally fortifying an animal feed, as taught by Hamstra et al. in view of Nevalainen et al. and Jane et al. One of ordinary skill in the art is motivated to combine the references as Jane et al. teach animal feed can be nutritionally fortified by the inclusion of minerals

while Overton teaches that calcium is traditionally used in animal feed. One of ordinary skill in the art would have a reasonable expectation of success at a phytase-containing granule also comprising calcium as the use of calcium in animal feed is well known. Therefore the invention as a whole would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made.

13. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamstra et al. in view of Nevalainen et al. (Ref. BJ, cited in IDS) and Jane et al. (U.S. Patent No. 5,397,834) as applied to claims 18 and 19 above, and further in view of Bedford et al. (U.S. Patent No. 5,612,055). Claim 24 adds the further limitation of the phytase-containing granulate additionally comprising an endoxylanase and/or β-glucanase. The teachings of Hamstra et al. in view of Nevalainen et al. and Jane et al. have been discussed supra. Hamstra et al. in view of Nevalainen et al. and Jane et al. do not teach a phytase-containing granulate additionally comprising an endoxylanase and/or β-glucanase. Bedford et al. teach (column 7, lines 14-19; column 8, lines 16-28) a feed additive comprising xylanase, β-glucanase and phytase. Bedford et al. do not teach a phytase-containing granulate prepared by processing a solid carrier comprising at least 15% (w/w) of an edible carbohydrate polymer and an aqueous liquid comprising phytase of 14,000 FTU/g. A phytase-containing granulate additionally comprising xylanase and β-glucanase would have been obvious to one of ordinary skill in the art at the time the invention was made. One of ordinary skill in the art would have been motivated to combine the teachings as Bedford et al. teaches a feed additive comprising xylanase, β-glucanase and phytase and the teachings of Hamstra et al. in view

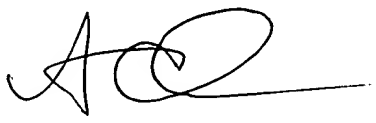
of Nevalainen et al. and Jane et al. teach a phytase-containing feed granulate. As Bedford teaches using phytase with xylanase and β-glucanase as a feed additive, one of ordinary skill in the art would have added xylanase and β-glucanase to the phytase-containing granulate taught by Hamstra et al. in view of Nevalainen et al. and Jane et al. One of ordinary skill in the art would have had a reasonable expectation of success at doing this as adding enzymes to granulate feeds is well known in the art. Therefore the invention as a whole would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made.

14. No claims are allowed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Tung, Ph.D. whose telephone number is (703) 308-9436. The examiner can normally be reached on Monday-Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy, Ph.D., can be reached on (703) 308-3804. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



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